

REMARKS

Claims 4-19 are pending in the application and stand rejected.

Double Patenting

Claims 4-19 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6, 11-12, 21-26 and 32-34 of co-pending U.S. S/N 09/915,719. In particular, the Examiner finds that both applications claim a method of controlling, or testing a magnetoresistive solid state storage device, comprising the steps of accessing a set of storage cells, and determining whether information is unrecoverable from a block of ECC encoded data or whether the accessed set of storage cells is suitable for storing at least one block of ECC encoded data. Applicant disagrees with the Examiner's characterization of the two applications and therefore respectfully traverses this rejection. The claims of the '719 patent are directed to a method for controlling a magnetoresistive solid-state storage device having a plurality of storage cells for storing a block of ECC encoded data. The present claims are directed to a method for testing a magnetoresistive solid state storage device. Thus, one invention is directed to a method of using a magnetoresistive solid-state storage device, whereas the other invention is directed to testing such a magnetoresistive solid-state storage device prior to being put in use.

Furthermore, the present claims recite determining, from accessing the set of storage cells, one or more failed cells, determining the position of the failed cells, and from this determining one or more symbols of ECC encoded data which, in use, would be affected by failed cells in their position. There are no such actions recited in any of the claims of the '719 application, nor any other actions that could be viewed as similar to these actions. Similarly, some of the claims of the '719 application recite identifying, from the ECC decoding, zero or more failed symbols in the block of ECC encoded data, and comparing the identified number of failed symbols against a threshold value, the threshold value being set to be in the range of about 50% to about 95% of the maximum number of failed symbols which can be corrected by error correction decoding the block of ECC encoded data. There is nothing similar to these actions

claimed in the present application. The other claims of the '719 application contain even further limitations that are not presently claimed, and which the Examiner has not specifically compared with the present claims. Applicant therefore respectfully requests the Examiner to withdraw this rejection, or else to show where *each and every* presently claimed limitation is claimed in the '719 application.

Rejection under 35 U.S.C §102

Claims 4-19 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,458,349 to Aichelmann. In particular, the Examiner finds that, with regard to claim 4, Aichelmann discloses all of the claimed limitations, including determining, from accessing the set of storage cells, one or more failed cells, determining the position of the failed cells, and from this determining one or more symbols of ECC encoded data which, in use, would be affected by failed cells in their position, at col. 4, ll. 53-57. Applicant respectfully disagrees with the Examiner's characterization of the teaching of Aichelmann.

Aichelmann is directed to what is by now a well-known fault-tolerance technique, i.e. a method of operating a large, fault-tolerant, semiconductor memory that is *known* to contain one or more defective bit positions, and that relies on the property of semiconductor memories that each such defective bit position is permanently stuck in either a "0" or a "1" position (which is obviously not true of magnetoresistive solid-state storage cells). Aichelmann thus teaches storing a data word in its true form or its complement form in the faulty memory, according to the nature of the defective bit position.

In particular, the method described by Aichelmann involves storing a data word including an ECC check byte at an address that is known to include a defective bit position. If the data is stored in complement form, the ECC check byte is stored in true form so that when that position is subsequently addressed and processed, the ECC system indicates an uncorrectable error. At that point in the read process, the data word is automatically recomplemented and a new ECC check character is generated and compared with the initially stored ECC check character. A compare equal indicates valid data in the word and no errors. A compare not equal indicates a multi-bit error that is reported to the system as an uncorrectable data error, at which point the

system may respond in any one of various ways. In essence, Aichelmann describes an example of an arrangement in which alternative encoding schemes are used, and detected ECC errors are used to distinguish between the encoding schemes by using them as a signal to apply a different decoding scheme.

The particular portion of Aichelmann cited by the Examiner has nothing to do with the claimed determining, from accessing the set of storage cells, one or more failed cells, determining the position of the failed cells, and from this determining one or more symbols of ECC encoded data which, in use, would be affected by failed cells in their position. Rather, this is the portion of the disclosure that teaches that the stored data word is re-complemented and a new ECC check character generated to be compared with the originally stored ECC check character. There is nothing anywhere in Aichelmann that can be understood as teaching the determining of the position of failed cells, and then from this determining one or more symbols of ECC encoded data which, in use, would be affected by failed cells in these positions. Applicant respectfully submits that the Examiner has misread the disclosure of Aichelmann and, in view of the above, requests the Examiner to withdraw this rejection and pass claim 4 to issue.

Claim 5 is dependent from claim 4 and thus Applicant submits that this claim is also allowable.

With respect to claim 6, the Examiner alleges that the very same portion of Aichelmann at col. 4, ll. 53-57, now discloses something completely different, namely the claimed obtaining a parametric value for each of the set of storage cells, and comparing each parametric value against a range or ranges. This portion of the disclosure has been discussed above, and Applicant submits that there is nothing therein that can be understood as comparing a parametric value against a range or ranges. The Examiner actually acknowledges this, as he further alleges that this limitation is "well within the scope of Aichelmann's invention since a person of ordinary skill in the art understands that a threshold value, in this situation, can be either a fixed value or a range or ranges of values." This same exact logic has been employed by the Examiner in rejecting the '719 application, and as Applicant has previously noted in a reply to that rejection, this is an improper rejection under 37 C.F.R. §102. To support a proper 37 C.F.R. §102 rejection, a prior art document must teach each and every limitation of the rejected claim. The

Examiner himself clearly acknowledges that Aichelmann does not teach at least the limitation of comparing each parametric value against a range or ranges. Therefore, Aichelmann clearly cannot support a §102 rejection.

The Examiner appears to attempt to compensate for the deficiencies in Aichelmann's disclosure by asserting that the *scope* of Aichelmann encompasses the undisclosed limitations because a person of ordinary skill in the art understands that a threshold value, in this situation, can be either a fixed value or a range or ranges of values. Erstwhile, Applicant respectfully submits that the scope of the invention set forth in a prior art patent, which is typically understood to refer to that which is actually claimed, is accorded no weight whatsoever in any of the subparagraphs of 37 C.F.R. §102. Furthermore, whether a person of ordinary skill in the art understands that a threshold value, in this situation, can be either a fixed value or a range or ranges of values or not is equally irrelevant to a 37 C.F.R. §102 inquiry, which concerns itself with that which is actually taught by the prior art, not that which was within the purview of the skilled person at the time the invention was made. The later inquiry belongs in a 37 C.F.R. §103 rejection, which is not asserted anywhere in the present Action.

Applicant thus traverses this rejection as being improper because the Examiner has failed to show where Aichelmann discloses each and every claim limitation, as mandated by 37 C.F.R. 1.104(c)2.

Additionally, and for the sake of submitting as complete a response as possible, Applicant further notes the Examiner has made no showing in support of his assertion that a person of ordinary skill in the art understands that a threshold value, in this situation, can be either a fixed value or a range or ranges of values. As clearly posited by MPEP 2143.03, "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." (emphasis added) The Examiner has not made such a *prima facie* showing. At best, Applicant can understand that the Examiner is relying on facts within his personal knowledge in making this assertion regarding the knowledge of the skilled person. In this case, Applicant respectfully requests that

the Examiner provide an Affidavit pursuant to 37 C.F.R. § 1.104(d)(2) in support of the assertion that a person of ordinary skill in the art understands that a threshold value can be a fixed value or a range of values.

In view of all of the above, Applicant submits that claim 6 is allowable and requests the Examiner to pass the claim to issue.

Claims 7 – 11 depend from claim 6, and therefore are also allowable.

Claims 12-19, "due to their similarities to claims 6-11, are rejected for reasons similar to those set forth against claims 6-11." In light of the Examiner's proffered reasoning, Applicants directs the Examiner's attention to the above discussion of claims 6-11 and submits that, due to their similarities to claims 6-11, claims 12-19 are therefore also allowable over Aichelmann.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 08-2025. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 08-2025.

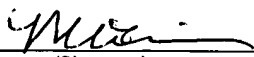
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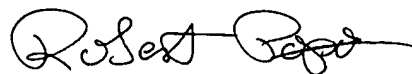
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